



NEW HAMPSHIRE DEPARTMENT OF ENVIRONMENTAL SERVICES

RECOMMENDED ANALYTICAL METHODS FOR PETROLEUM CONTAMINATED SITES (see note 1)

PETROLEUM PRODUCT	WATER MATRIX			SOIL MATRIX (see note 2)		
	Analytes	Recommended Analytical Methods		Analytes	Recommended Analytical Methods	
		Initial Round	All Other Samples (see notes 3 & 9)		Initial Round	All Other Samples (see note 3)
Gasoline and similar weight product	VOC (see note 4)	Full VOC List	Full VOC List or Petroleum VOC Short List	VOC (see note 4) TPH-as Gasoline	Full VOC List (see note 8) 8015B-GRO (see note 8)	Full VOC List or Petroleum VOC Short List (see note 8) 8015B-GRO (see note 8)
No. 2, 4, 6 Fuel Oil Diesel Waste Oil(see note 5) and similar weight product	VOC (see note 4) PAH (see note 6)	Full VOC List 8310 or 525 or 8270(see note 7)	Full VOC List or Petroleum VOC Short List 8310 or 525 or 8270(see note 7)	VOC (see note 4) PAH(see note 6), TPH-as Fuel Oil As, Ba, Cd, Cr, Pb, Hg, Se, Ag (waste oil only- see note 5)	Full VOC List (see note 8) 8270 or 8310, 8015B-DRO 6010 or 7060, 7080, 7130, 7190, 7420, 7470, 7740 cold vapor, 7760	Full VOC List or Petroleum VOC Short List (see note 8) 8270 or 8310 8015B-DRO 6010 or 7060, 7080, 7130, 7190, 7420, 7470, 7740 cold vapor, 7760

VOC: Volatile Organic Compounds
 TPH: Total Petroleum Hydrocarbons
 MTBE: Methyl-t-butyl ether
 PAH: Polyaromatic Hydrocarbons

P&T-GC/FID: Purge and Trap - Gas Chromatography / Flame Ionization Detector
 TCLP: Toxicity Characteristic Leaching Procedure
 AGQS: Ambient Groundwater Quality Standards
 RCM Policy: NHDES Contaminated Sites Risk Characterization and Management Policy

- NOTES:**
- (1) EPA method results must be reported to DES according to SW 846 current edition.
 - (2) Soils destined for off-site treatment must be analyzed in accordance with Env-Ws 412.14.
 - (3) Analytical methods used for all other samples must be able to detect all analytes discovered in the initial round. For the purpose of site closure, the analytical method shall be capable of detecting concentrations at or below the regulatory cleanup level.
 - (4) For VOC analytical methods and reporting requirements, see the footnotes in the "Petroleum and Hazardous Waste Full List of Analytes for Volatile Organics" and the "Petroleum Remediation Short List of Analytes for Volatile Organics."
 - (5) Metals analysis must be performed on waste oil contaminated soils. Soil standards in the NHDES RCM Policy are based on total metals. Analysis for soils destined for off-site treatment are based on TCLP.
 - (6) PAH analysis shall be completed on all sampling locations during the initial round of sampling for soil and water.
 - (7) Ion-specific analysis may be required on 8270 tests for selected compounds in order to reach detection limits that are less than the AGQS.
 - (8) Soil samples collected for VOC analysis shall use EPA 5035 (methonal preservation) as required in the NH DES Soil Policy.
 - (9) Additional field testing and laboratory analysis of geochemical indicators may be required on a site specific basis at the request of DES.